

ABSTRACT

A turbine unit especially for a turbocharger, comprising a rotor housing (2) having at least one admission channel (9) for a fluid, as well as a turbine rotor (4) which is supported in a turbine space (23) of the rotor housing (2) and wherein fluid is led into the turbine space (23) at its periphery through a VTG mechanism (5-8) of variable turbine geometry. The VTG mechanism (5-8) comprises a nozzle ring (6) having a plurality of vane shafts (8) which are arranged in the form of a crown on the nozzle ring (6) and which carry on one of their ends vanes (7) which can be moved from a substantially tangential position (relative to the crown) into a substantially radial position, as well as at least one control element (19) in order to pivot the orientation of the vanes (7). Further an actuation mechanism (11) is provided which creates control movements that can be transmitted to the VTG mechanism (5-8) through a control ring (5). The control ring (5) and the nozzle ring (6) are coaxially arranged and adjacent to each other whereby the control ring (5) is movably connected to at least one of the control elements (19). Control ring (5) is in contact with a guiding and centering arrangement, which comprises at least one roller bearing (3, 20, 21) which has roller bodies (3) that can roll on roller contact surfaces (20) of control ring (5). Roller bearing (3, 20, 21) is located between control ring (5) and a ring (6, 38) which is possibly releasably connectable with rotor housing (2), so that control ring (5), roller bearing (3, 20, 21) and the releasably connectable ring (6, 38) can be mounted into the rotor housing as a modular unit (26).